Meeting Summary
Bioaccumulation Modeling Update Conference Call
May 13, 2019

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Participants
EPA Region 2: Jonathon Clough, James Wands, Diane Salkie, Scott Kirchner
DEP: Myla Ramirez, Jay Nickerson, Jennifer Daley
CPG: Mike Johns, Suzanne Replinger, Kelly Croteau, Annie Gibbs, Rob Law

Meeting Overview:
Conference call to discuss status of bioaccumulation model calibration.

Review of Current Calibration
- Windward presented slides showing current calibration for steady state model (reviewed SPAFs and invertebrate BSAFs) and plots showing dynamic model results.
- Suggestions regarding plots:
    - Use predicted tissue concentrations from steady state model as initial tissue concentrations for dynamic model.
    - Add empirical data to time series plots (as done previously)
- Various lines of evidence (i.e., steady state model performance, benthic BSAFs, and dynamic model performance) indicate model is performing well. Calibration is near-final, pending review of alternate calibrations and EPA review of model.
- CPG will provide copies of the updated model input files (both steady state and dynamic) to help EPA in review of calibration.

Alternate Calibrations
- Jonathan Clough presented slides regarding process for developing alternate calibrations using auto calibration approach.
- Discussed process and selection of ranges and agreed on the following:
    - Parameters excluded from evaluation include parameters from CFT model, fish lipids/weights, and parameters developed from FB4 model.
    - Narrower ranges than overall ranges provided by CPG will be used for select parameters (e.g., K_{ow} for 2,3,7,8-TCDD and water temperature)
    - Parameters linked to invertebrate biomass / small fish abundance will be simplified for auto calibration.
    - 1,2,3,4,6,7,8-HpCDF will be used as a verification chemical (rather than being include in auto calibration process).
- CPG will provide abundance / biomass estimates for invertebrates and small fish (see Table 1 below).

Next Meeting
- Primary topic will be to review/discuss alternate calibrations.
- Date TBD (will be determined by email).

Table 1.   Summary of estimated biomass for invertebrates and abundance for small fish by LPRSA modeling area

Category and Species	Proportional Abundance / Biomass by Modeling Area (%)					
	RM 0 to RM 6		RM 6 to RM 14.7		RM 14.7 to RM 17.4	
	Best Estimate	Range	Best Estimate	Range	Best Estimate	Range
Benthic Invertebrates						
DEPs	54	33 to 73	25	17 to 34	36	16 to 66
FFs	22	3 to 44	27	12 to 53	42	28 to 66
DETs	23	21 to 26	34	15 to 43	12	3 to 25
C/Os	1	1 to 2	14	7 to 20	10	1 to 27
Small Fish						
Filter-feeding fish	39	16 to 98	21	0 to 60	0	0 to 5
Small forage fish	59	1 to 83	71	38 to 62	51	41 to 62
Small American eel	2	1 to 6	8	0 to 31	49	38 to 59